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ABSTRACT

The purpose of this study was to understand how schools can raise school performance, with emphasis on schools serving low-income students and schools with low baseline performance levels. The research focused on a limited group of rapidly improving schools in Washington state and a small number of matched nonimproving schools studied for purposes of comparison. In the 1998-1999 school year, a related study focused on improving elementary schools. This study expands the investigation to include middle schools but continues to interview representatives of elementary schools in their third year of testing in the Washington Assessment of Student Learning (WASL) program. To see if the 1998-1999 findings held true for middle schools, researchers interviewed principals at 32 middle and junior high schools across the state. Twenty-two of these schools had made strong gains on the seventh grade WASL. Also interviewed were 10 principals from middle and junior high schools with similar characteristics that made few or no gains from 1998 to 1999. Interviews were also held with 24 principals from the elementary schools of the previous study. Findings show that improving middle schools are applying the same improvement strategies elementary schools are using, only in slightly different ways. Successful middle schools: (1) overcome the culture of compartmentalization"; (2) analyze and address incoming students' needs; (3) take a hands-on, interventionist approach to student learning; (4) aggressively support students who need extra help; and (5) focus on opportunities rather than excuses. The study also identified challenges both middle and elementary schools face in the process of improvement. An appendix discusses studying gains and losses in WASL scores. (SLD)

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MAKING STANDARDS STICK:

A FOLLOW-UP LOOK AT WASHINGTON STATE'S SCHOOL IMPROVEMENT EFFORTS IN 1999-2000

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April 2000

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Introduction

In 1993, the Washington legislature enacted EHB 1209, the Washington State Education Reform Act, which set in motion the creation of new K-12 educational standards and assessments to measure student performance in several areas. The first testing began in the spring of 1997 when Washington's 4th grade students took the Washington Assessment of Student Learning (WASL) in reading, writing, math and listening.

Each year since, the new state standards system has expanded. In 1998, middle schools administered the first round of assessments in reading, writing, math and listening to 7th graders. In 1999, the first 10th grade assessments were piloted.

As the system grows, so does the pressure to improve. Now that they have had more time to get used to the new standards and adjust their practice, schools are expected to make gains in student achievement. They are seeing their successes and failures broadcast on the front page of local newspapers. The Legislature has required elementary schools to set four-year reading targets, and the new state commission A+ Commission is defining how schools will be held accountable for ensuring that their students meet the new standards.

The purpose of the educational standards system is not to create pressure for its own sake. The system is, instead, meant to focus the efforts of individual schools toward common learning expectations as defined by the state Essential Academic Learning Requirements (EALRs). Seven years into the process, the state is now faced with two challenges: First, ensuring that all students meet the new higher standards for student learning; and second, making certain that improvements in school and student performance are sustained over time.

The Center on Reinventing Public Education is attempting to answer these questions by studying how principals and teachers respond to the new state standards and documenting effective strategies for improving school performance on the new state exams.

Research Strategy

The purpose of this study was to understand how schools can raise student performance. We were particularly interested in schools serving low-income students and schools with low baseline performance levels. In addition, the study sought to know whether schools could sustain gains in performance, and what it takes to do so.

Our research focused on a limited group of rapidly-improving schools and a small number of matched non-improving schools studied for purposes of comparison. We did not study a representative sample of all Washington schools. In fact our schools were non-representative; we studied them because they were dramatically improving. Our results show what *can* be done, not what is being done in the average Washington State school.

1998-99 study: Making Standards Work

This year's study is our second. Last year, results from the 1998 WASL offered the first opportunity for us to look at changes in test scores over a two-year period. In our 1998-99 study, we interviewed improving elementary schools, defined as those whose scores had increased at more than twice the statewide average, and compared their improvement strategies to schools that served similar groups of students, as measured by race and income, but were not making progress.

We were especially interested in studying rapidly-improving schools with high poverty rates, on the belief that their success stories would help those struggling with similar challenges. Although not all of the schools we studied were high poverty schools, most of our sample schools had poverty rates above the state average. Our goal was to find common threads in these schools' strategies and to share those insights broadly to help other schools improve.

We found striking differences between the two groups. Improving schools had the following common attributes. They:

- Focused on a few key schoolwide goals.
- Pulled staff together to work as a team.
- Based improvement strategies on the unique needs of their school.
- Targeted resources and energy toward their key goals.
- Understood that attitude matters.

Schools making strong test score gains were able to do so regardless of the students' poverty levels, mobility rates and other challenging factors.[1] These results prove that school actions *do* influence student achievement. Though, on average, low-income schools are relatively low-performing, these findings show that at least some schools are able to overcome the poverty–achievement connection. [2]

This Year's Study: Making Standards Stick

This year we deepened our inquiry by expanding the study to include middle schools and continuing to interview elementary schools in their third year of testing.

In an attempt to understand whether our 1998-99 findings would hold true for middle schools, we interviewed principals at 32 middle and junior high schools across Washington State.[3] Twenty-two of those schools made strong gains on the 7th grade WASL. As a basis for comparison we also interviewed 10 principals from middle and junior high schools with similar characteristics that made little or no gains from 1998 to 1999. We selected a range of schools from rural, urban, and suburban districts.

In addition, in an attempt to better understand what it takes to sustain such improvements and to identify barriers that might get in the way of making such improvements, we again interviewed elementary school principals across Washington State. We completed interviews with principals in 24 of the 26 improving elementary schools we studied last year, hoping to learn how they fared in the 3rd year of testing and to discover how schools that sustained improvement were able to do so. We also interviewed principals in a small group of elementary schools that failed to make any gains during the first 2 years of testing, but brought their scores up in the 3rd year. The interviews focused both on the strategies employed by schools and on the challenges they faced in sustaining their improvements.

The confidential interviews, typically 45 minutes each, were conducted from October through December of 1999. The interviews sought principals' perspectives on why

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[1] For a more complete discussion of last year's findings, see Lake, Hill, O'Toole and Celio: Making Standards Work. Thomas B. Fordham Foundation. July 1999.

[2] For recent studies showing similar results, see: *Promising Practices Successful Texas School-wide Programs: Research Study Results* The Charles A. Dana Center. The University of Texas at Austin. February 1997. *Dispelling the Myth: High Poverty Schools Exceeding Expectations.* A report from the Education Trust in cooperation with the Council of Chief School Officers. 1999.

[3] For a detailed description of how schools were selected, please see Appendix A.

students in their schools performed as they did. We also attempted to identify other factors that may have influenced student performance in the school, such as student population, staffing levels and quality, funding amounts and flexibility, instructional goals and methods, school environment and culture, and school relationships with parents. Principals were also asked about sources of pressure to improve WASL scores, and the sources and usefulness of help, advice, and teacher training their school received.

In addition to our interviews with principals, we conducted case studies of four schools - two middle schools and two elementary schools - to gain greater insight from the perspectives of teachers, parents and students. What we heard during these visits supported what principals had told us and increased our confidence in our findings, particularly in our understanding of the challenges schools face in responding to the new state expectations.

In the following sections, we present an overview of the strategies elementary schools and middle schools are using to make gains. We detail how middle schools are applying these common strategies and how some elementary schools are sustaining their gains and possible reasons that some are not. Finally, we discuss challenges all schools are facing and present recommendations for how policymakers, philanthropists and others who support schools can help address some of these challenges.

Acknowledgements

We wish to thank Partnership for Learning for sponsoring this research and helping to distribute the findings. We are also grateful to the principals, teachers, students, and parents who participated in this study. Finally, our thanks to our colleagues at the Center on Reinventing Public Education: Sarah Brooks, Christine Campbell, Julie Comiskey, Paul Hill, and Abby Winger, who provided first-rate counsel and assistance.

Findings Overview

In our first year study, Making Standards Work, we learned that individual schools can make changes that lead to improved student learning. This can be so even if the schools are challenged by limited funding, high poverty levels among families, and instability created by frequent changes in teaching staff, administrators and students. Our findings from middle schools this year confirm that there are clear, well-defined steps to take toward school improvement: focus, teamwork, targeted resources, and shifting attitudes. The findings from the second-year study also deepen our understanding of the common strategies employed by improving schools. The steps are not necessarily easy, but they can move a school from a place where adults act as if student characteristics determine school performance to one where challenges are managed and overcome.

We found that improving middle schools are applying the same strategies elementary schools are using in slightly different ways to address their particular needs. Successful middle schools:

- Overcome the "culture of compartmentalization."
- Analyze and address incoming students' needs.
- Take a hands-on, interventionist approach to student learning.
- Aggressively support students who need extra help.
- Focus on opportunities, rather than excuses.

Our further interviews with elementary schools that made strong gains last year showed that most of those schools were learning how to sustain their gains. We also found that it is not enough to make a one time, herculean effort to change how a school works. Sustained improvement requires a continuous and deep effort.

And finally, we heard from both elementary and middle schools about a number of major challenges that they face. Policy makers, philanthropists, and other supporters of public education need to help schools address issues such as:

- Finding tools and time to analyze school needs.
- Staying focused on essential skills without sacrificing learning in other important subject areas.
- Making sure pressure on principals and teachers, especially 4th and 7th grade teachers, does not lead to frustration and burn-out.

- Making sure state and district rules do not interfere with individual school needs.
- Finding the right balance between principal authority and staff autonomy.
- Dealing with teacher and administrator mobility.
- Getting parents and students on board and keeping them engaged.

The following sections describe these findings in finer detail and conclude with a set of recommendations for state and district actors.

Common Strategies for School Improvement

Regardless of their unique circumstances, improving middle and elementary schools are taking common steps to improve student learning. Improving schools:

- Focus instruction on key student learning goals.
- Operate as a school-wide team, not as a random association of individuals.
- Identify and address unique needs of school staff and students -- recognizing there is no one silver bullet.
- Identify students who need extra help and give it to them.
- Target energy and resources toward key goals.
- Recognize that attitude matters.

Improving schools recognized that they could not do everything at once. They focused their improvement efforts on a few key goals that they identified through on-going assessment of the strengths and weaknesses of the school and the individuals in it. Rather than lamenting the quality of student who arrives at their doorstep, these schools gathered and analyzed information on their students and developed strategies to address their needs as individuals and groups. To accomplish shared goals, teachers and administrators at improving schools worked together as teams, making changes to lesson plans, instructional practices, materials and school activities with the best interest of the whole school in mind.

In general, the improving schools we interviewed were pro-active, adaptable organizations. Once they had a clear picture of their goals, they targeted their energy and resources strategically to make improvements. Underlying their efforts was a positive, can-do attitude despite the enormity of the challenges they face in helping all students reach and exceed the new expectations set by the state.

The comparison schools we studied were either not implementing these strategies or implementing them to a lesser degree than the improving schools.

Improving schools focused instruction on key student learning goals.

Improving schools made quality of teaching their first priority, not one of many competing priorities. After reviewing their curriculum and instructional practices with the new state standards in mind, they made tough choices about what to keep, what to cut, and what to adapt in order to help students reach the new learning expectations. A principal from an improving school aptly described the difficult choices the staff at the school made:

> *"You could dump all your electives and focus solely on the WASL. But then you lose the arts, and if you lose the arts you lose the vehicle of culture so to speak. But at the same time you don't want to waste any energy. So we had to talk a little bit about for instance some pet projects that people like to do because they're nice, warm, fuzzy things and they've always done them. We really had to ask the question, 'Well, does it get us where we need to go? Is time better used maybe in some other project?'"*

However, this did not necessarily mean that areas not directly tested on the WASL disappeared from these schools. Instead, teachers and administrators often targeted activities more directly to the Essential Academic Learning Requirements by reinforcing reading and writing skills in the course of teaching music, art or physical education.

Improving schools operated as a school-wide team, not as a random association of individuals.

Principals stressed the importance of teamwork in their efforts to make improvements school-wide. Though WASL testing took place only in 4th and 7th grades, raising scores was not the responsibility of the 4th or 7th grade teachers alone. Nor was responsibility focused only on teachers of Language Arts and Mathematics. Improving schools expanded their improvement efforts beyond the grades and areas most directly impacted by the WASL, and created a whole-school emphasis on improvement. Professional development time was used to meet school-wide goals, not just to allow individual teachers to explore whatever interested them. And given the intensity of focus, teachers and students were no longer allowed to simply go through the motions or be anonymous. Below, two principals explain how their staffs are coming together to operate as coordinated problem-solving organizations:

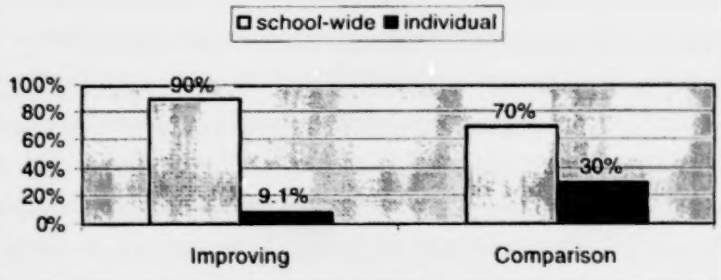
> *"Science teachers, Math teachers are really realizing we've got to work on reading strategies in our classrooms. We don't have to teach reading but we do*

have to work on teaching reading strategies in our classrooms whether we're in Science, or we're in Math or we're in Language Arts."

"Our structure is a real piece of our success. A kid cannot be anonymous and teachers have the opportunity to talk every day about instruction and share what they're doing. All the teachers know what the English teachers are doing. In a school that is not teamed, not only kids, but teachers can be self-employed. They can just walk into their classroom and close the door and do whatever they want. You can't do that in our structure."

As **Figure 1** shows, improving middle schools were more likely than their comparison schools to implement an improvement strategy school-wide, as opposed to allowing individual teachers to pursue their own plans in isolation. Most schools in our sample agree that school-wide goals and strategies matter. But having them in name is not enough. Improving schools were also more likely to ensure that staff were working toward the schools' common goals by providing planning time, incorporating the state standards and WASL into staff evaluations, and reviewing student performance as a school.

Figure 1
Percent of middle school principals with well established school-wide improvement strategies vs. strategies left up to individual teachers.
(n=32)

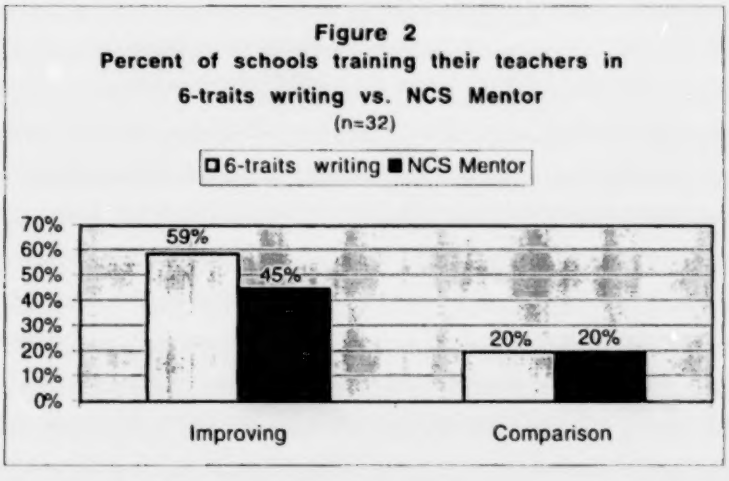


In addition:

- Improving schools were more likely to provide common planning time (52% vs. 33%).
- Improving schools were more likely to incorporate the state standards into the staff evaluation process (38% vs. 22%).
- Improving schools were more likely to review student assessments in reading, writing or math as a staff intermittently throughout the year (24% vs. 11%).

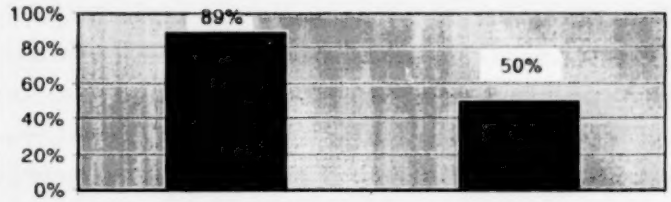
Improving schools identified and addressed unique needs of school staff and students.

As **Figure 2** shows, use of sample tests and a writing program specifically aligned with the WASL (Six-traits writing) did seem to contribute to middle school improvement rates. We saw no other strong patterns, however, to indicate that a particular curriculum or instructional strategy made the difference in the improving schools. Rather, principals and teachers in schools that made gains sought and analyzed data about themselves and their students to make more informed decisions about school priorities and adopted strategies appropriate to address their individual weaknesses. In addition to reviewing curriculum and instruction in light of the new standards, the principals, often with the help of teachers, broke down WASL data teacher-by-teacher and discussed it. Using standardized test data and input from "feeder" elementary schools, they gained a better understanding of their students and developed strategies to help them succeed. They recognized that sustained improvement could not be accomplished with a "silver bullet" but rather by carefully designed, implemented and evaluated efforts focused on their unique students' needs.



Improving middle schools were more likely to have made a change their instructional programs in preparation for or in response to the WASL **(Figure 3, next page).** Schools opted for changes to meet the specific needs of their school's weaknesses such as "writing or reading across the curriculum," doing more problem-solving in math, incorporating "WASL like activities" in general, or adopting new curriculum (sometimes explicitly aligned to the EALRs).

Figure 3
Percent of schools that made a change in their instructional program in response to the WASL
(n=32)



One principal described how staff are learning to translate test data into better teaching:

> *"It's helping the teacher understand what assessment is. That it's not just make a plan and do the plan just because you think it's a cool thing. You need to be paying attention to what information you have, what students are producing, what they're doing. Pay attention to that and let that drive what you're doing with your kids."*

Another principal described a plan to help staff become more sophisticated users of test data to help sustain improvement.

> *"This year was the first year that the teachers got (WASL scores) sorted by teacher. I gave them their results so that they could look at them, and then asked them if they wanted to share some feedback with me. Next year I'm going to step that up a little bit. You know, raise the level of accountability. So when we're looking at that I can ask, 'What are some trends that you see? What are some strategies that you think you need to implement?'"*

Energy and resources were targeted toward key goals.

Improving schools did more than analyze their needs and talk about how to reach their goals. Working with no more resources than the comparison schools, they treated time, money and energy as scarce and valuable resources, and targeted them directly toward their common goals. Rather than allowing their efforts to be defined by resource limitations, they devised creative ways to pursue their strategies. For example, two principals described how they have elevated the use of time:

> *"We thought that the key to doing better on the WASL was to get kids to write better. Not just for the writing component of it, but the math component as well because there's so much writing there. And so what we did was, and we didn't have any extra money to do this, but we said, 'OK what if we had a way to reduce the student/teacher ratio in English and get it down to about 15:1? What would happen?' And so we kind of finagled the schedule. And so even though kids didn't have English for the full year, we had them for an extended period for two out of the three trimesters."*

> *"I think we've become more intentional on treating class time as gold. We can't continue to do everything and have a cohesive approach to it"*

One school we studied purchased an expensive New American School design for its building. To afford it, the school underwent dramatic restructuring of resources and staffing:

> *"The program (we're using) is very expensive. We had to be flexible about how we used our funds. We used our Title One money in a different way. In the second year, we hired more tutors, using more paraprofessionals rather than certificated staff so that we could have more adults working with students. The first year's materials are very costly and more of our money went into buying materials. I gave up an administrative assistant salary to help pay for it. The district gave us some help and has been very supportive. They allowed us to use a different staffing model – instead of having an administrative assistant, we could use the funds for materials. We had a district-wide reading adoption, but because we had our own program, we were exempted from adopting the new program and were given the money that would have gone to that program and could keep it for our own needs."*

Improving schools acted as if expectations matter.

Principals and teachers in improving schools were driven both by an internal desire to see their students improve and by external demands from the state and district. As **Table 1** shows, improving middle schools were more likely to report that the pressure to improve came from staff motivation to prove they could do better than the school's initial test scores. The comparison schools were more likely to identify their district as the primary source of pressure to improve.

Table 1: Sources of pressure for middle schools

	Internal	District	State[4]	Parents	Public
Improving Schools (n=22)	72.7%	63.6%	27.3%	13.6%	18.2%
Comparison schools (n=10)	60%	70%	20%	10%	30%
All schools (n=32)	68.8%	65.6%	25%	12.5%	21.9%

Rather than fold under the weight of the increased pressure to perform, improving schools acted as if their expectations mattered and embraced the challenge before them by setting achievement goals at the school and individual teacher and student level beyond a comfortable level. As one principal told us,

> *"I think overall as a school we were pretty much bought into the idea that there are some really good things about (the WASL). We may not like everything about the game, but this is the game that we're in, and so if we're going to play it, let's play it well and let's play to win."*

Interpreting and Applying These Findings

All of the improving schools in our study shared these common strategies for increasing student learning. It is important to note, however, that several comparison schools adopted some of these strategies and did not see their scores rise. The difference between

[4] *The number of principals reporting feeling pressure from the state may be misleading. Most principals implied that the state standards and assessment system itself was a source of pressure, but did not report it as direct pressure from the state.

these comparison schools and the improving schools appeared to be the depth and breadth of implementation rather than the presence or absence of promising strategies. Some schools are in the early process of change and are still unable to demonstrate results. For instance, one middle school in our comparison sample had made promising changes (i.e. implementing a new team-teaching structure) in 1998 but its scores did not improve in 1999. It is possible that with more time to develop the new approach and more attention to other strategies that will complement the new structure, that school, and others like it, will begin to see results. Based on our interviews, we believe that the deeper and more comprehensive the change, the more likely improvement is to occur.

Schools can label their actions in particular ways, but that does not mean all that claim a label follow the same line of action. Some schools that did not improve claimed to be adopting school-wide methods or a focused strategy. But implementation is the key. These actions have to dominate the school, they cannot be small-scale initiatives that leave everything else intact and provide little more than the warrant for saying, "Yes, we are doing that too."

Therefore, these strategies should not be seen as a checklist for guaranteed improvement in students' scores. Some strategies may be more important depending on the school context. Others may need to be adapted to respond to a particular school's needs. In the next two sections, we describe how improving middle schools applied these general strategies to meet their unique needs, and how elementary schools adapt them to the challenge of sustaining improvement.

Middle Schools: Applying Improvement Strategies to Address Unique Challenges.

Change does not come easily in the middle grades. Middle schools are generally larger than elementary schools, with more teacher specialization by subject area, and student electives, making teacher collaboration difficult. Middle and junior high schools receive students with a variety of elementary school experiences and have little time to influence performance before the 7th grade WASL test is given. Middle school students are early adolescents, focused on independence and questioning authority as they start to grow into adults and are less likely to take testing seriously. Middle school teachers are also less likely to try to intervene if a student's grades start slipping, assuming students should take responsibility for their own success. And to complicate matters, parent involvement typically wanes during the middle school years.

Raising standards, then, poses a difficult challenge for educators at this level.

Nevertheless, some middle schools made greater gains than expected on the 1999 WASL, based on their demographic characteristics. What set these schools apart is that they employed the common sense strategies highlighted above, adapting them to meet their unique challenges. Improving middle schools also:

- Overcame the "culture of compartmentalization."
- Analyzed and addressed incoming students' needs.
- Took a hands-on, interventionist approach to student learning.
- Aggressively supported students who needed extra help.
- Focused on opportunities, rather than excuses.

Improving middle schools overcame a "culture of compartmentalization."

Middle schools are traditionally organized around grade levels and subject area departments, and teachers are trained to be responsible for their unique subject matter. In this environment, school-wide collaboration and communication is difficult to achieve.

Some of the comparison middle schools in our study appeared to have given in to this "culture of compartmentalization." Improving middle schools did not. They identified and pursued school-wide goals, usually in areas like reading or writing, that cut across

curricular and grade level boundaries. They used their staff development time to work as a team toward these goals. When possible, they carved out common planning time for teachers to develop and review lessons in small groups, but always with their school-wide goals in mind. As a result, they created a culture that, while not always comfortable, stressed shared responsibility for their students' performance. As one principal said, "Nobody can be anonymous." A principal from another middle school explained:

> *"I don't mean this real negatively, but people can't hide out. You can't nod at the staff meeting in agreement with everything, then go in your classroom and do something different. You can't do that in this building anymore."*

Improving middle schools analyzed and addressed incoming students' needs.

Middle schools are being tested on student performance they have had little opportunity to influence. Students arrive with a variety of elementary school experiences and varying degrees of preparation, and schools have to "test what they get." For schools that begin in the 7th grade, teachers have less than a year to make their mark before the WASL is administered.

Given this situation, some schools may be tempted to deflect responsibility for their students' performance on the 7th grade test. As one principal from a comparison school suggested:

> *"So when kids came to us with the almost total absence of math facts and the almost total inability to write, without us being unprofessional, the finger is obviously pointing in one direction and it points down (to the feeder elementary school)."*

Improving middle schools, however, typically took a different approach. They chose to look more closely at the needs of their incoming students and use that information to make more informed choices about curriculum and instruction to meet the particular needs of those students. Some schools, like this one, went to their feeder schools for help:

> *"We get the scores from the (elementary schools') sixth grade students' spring tests...and we use those scores as we build the schedule for our seventh grade students."*

Rather than shifting blame to elementary schools, parents or students, improving middle schools took it upon themselves to become informed, understand the strengths and weaknesses of their students, and plan accordingly.

Improving middle schools took a hands-on approach to student learning.

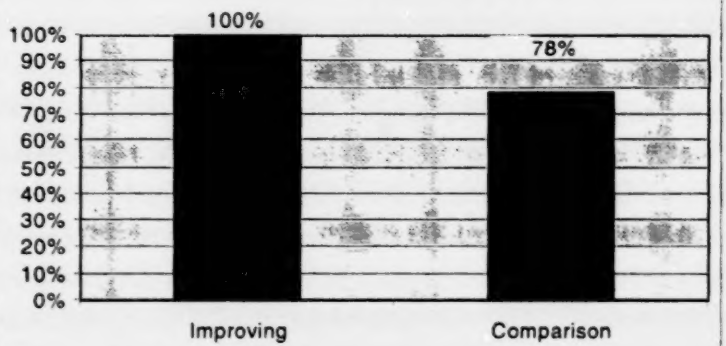
Middle school students are making an important transition from elementary school to high school, where they will need skills and confidence to seek out the help that they need to be successful. At the same time, students are expected to be more responsible for their own learning in the middle grades. Many middle school teachers take a very hands-off approach to student achievement, allowing students to get a taste of what it is like to "sink or swim." At one comparison middle school, the principal described this way of thinking:

> *"The culture among the staff here is still very much the classic Junior High...kind of an attitude of, 'Well, I've put out the content. It's up to the kids to get it.'...I still have a lot of teachers that move through their curriculum and say, 'Oh well you didn't get it.'"*

While this approach may work well for some students, others may be left behind, not yet ready for the responsibility it entails. Our conversations with principals, teachers and students confirmed that improving schools were more likely than comparison schools to have strategies in place to prevent individual students from slipping through the cracks. Researchers at the University of Chicago[5] found that a lack of this intensive intervention and remediation is the leading cause of student drop-outs and academic failure in Chicago's public high schools.

Figure 4 shows how middle school principals responded when asked whether they agreed with the statement: Students are sure to receive adult intervention when their grades start slipping. One hundred percent of the

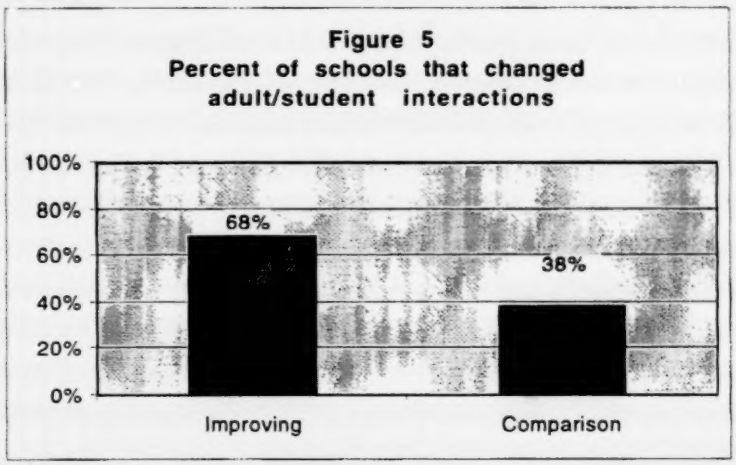
Figure 4
Percent of schools that applied adult intervention to slipping grades



[5] Roderick, M. and Eric Camburn. Academic Difficulty During the High School Transition. Charting Reform in Chicago: The Students Speak. The Consortium on Chicago Schools Research. July 1998.

improving schools in our sample agreed whereas just 78% of comparison schools said they did.

As **Figure 5** shows, improving schools were also more likely than comparison schools to have made a recent change to the way teachers and students interact in the school. Some comparison schools made minor changes, such as bringing in a police officer to improve safety in the school. Others did not have any strategy in place. When one comparison



school principal was asked whether the school had attempted to change the way adults and students interact in the school, the principal responded, "I'm not sure what they (teachers) are doing about that."

The hands-on, interventionist approach of improving schools often included working with parents as well, despite the challenges involved. One principal described this relentless work:

> *"We talk about kids every day. We look at those kids who are out on the edge. How can we make those kids feel connected, what can we do? We don't lose too many. We are working with parents constantly."*

Improving schools aggressively supported individual students who needed extra help.

By 7th grade, struggling students are reaching a critical juncture in their school careers. Any disadvantages they have faced may be exacerbated by increasingly difficult material, making intervention and remediation all the more necessary and important. Improving schools not only monitored student progress closely, they also targeted resources to

address the needs of students who were struggling most. They structured their programs to allow for more individualized attention from teachers. They used time before, during and after school to offer extra support in key areas like reading. As one principal explained:

> *"We identify the lowest readers in each grade level, and they are pulled out a period a day and are given intensive reading strategies and an oral fluency program."*

This did not mean, however, that improving schools focused solely on the needs of struggling students, to the exclusion of all others. For instance, one school created an after-school tutoring program for the lowest reading level students also made it a point to recruit adult mentors to work with students who did not qualify for the after-school program but could benefit from extra reading time as well.

Improving middle schools focused on opportunities, not excuses.

Rather than dwelling on factors that they felt were beyond their control (such as student demographics), principals talked about how they could make a difference in students' performance.

> *"In a grades 7-8 school, kids are either coming or going. It would be easy to say that our scores are based on the quality of the group of students that comes through that year...but we have worked very hard as a staff to throw that mentality out. We believe that our scores are going to reflect our teaching and if we continue to get better every year by sharpening our craft in the classroom, then regardless of the kids, our scores are going to improve. Our teachers buy into that and I believe it will hold true."*

All principals reported that it was difficult to get 7th graders to take the WASL test seriously. Without any immediate consequences associated with it, the test seemed just an exercise to many students. Some improving schools took this challenge head-on. One school used homeroom time to introduce a series of lessons on "taking responsibility" for your actions and your future. Another selected a group of outstanding 8th graders, trained them, and sent them to every 7th grade classroom to talk about the importance of the new standards and tests.

Thus, while some schools entertained excuses, many schools simply decided to do better. As one principal put it:

"It's a change in focus in saying, 'Yes, we don't have to be that school on the other side of the freeway with the lowest scores that everyone laughs at."

In sum, our findings are strong confirmation that middle schools can make a difference in raising achievement for students of any income level. Using similar strategies as elementary schools -- focus, teamwork, targeting resources, identifying their unique needs, and understanding attitude matters -- and adapting them to meet their particular challenges, middle schools can achieve goals beyond their expectations.

Elementary Schools: Addressing the Challenge of Sustaining Improvement.

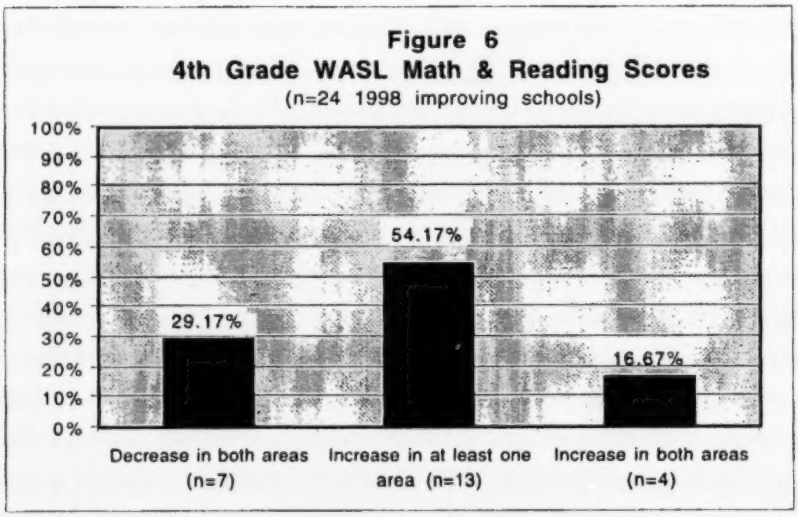
Improving elementary schools in 1998 and 1999 employed many of the same strategies for improving student achievement. But what happens after the first two years of testing when teachers, administrators, students and parents put their hearts and souls into raising student achievement on the WASL? Can the results be sustained? What will it take to make sure positive changes stick?

Not all of the elementary schools in our study were able to sustain the dramatic improvements in reading and math they made the year before. The majority, however, did manage to maintain or exceed their gains in at least one subject area. To do this, these schools found ways to intensify their efforts from the prior year. While the approaches they followed the previous year had served them well, further improvement came only as a result of refining and expanding upon these strategies. Our interviews with elementary schools revealed that:

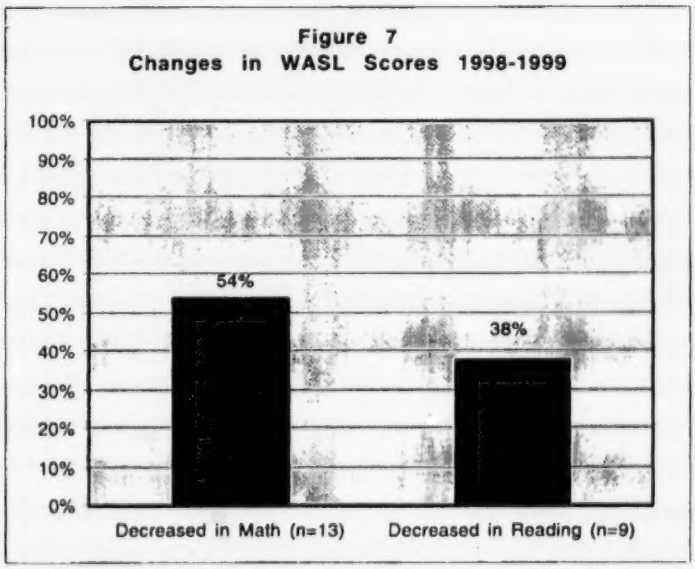
- Some elementary schools found it difficult to sustain last year's impressive gains, but most are learning how to do so.
- Schools that sustained improvement made deeper and more consistent changes.

Some elementary schools found it difficult to sustain last year's impressive gains, but most are learning how to do so.

Sustaining gains or falling back? Of the 24 improving schools from 1998, more than half increased the percentage of students with "proficient" scores either mathematics or reading by more than 5% between 1998 and 1999. However, as **Figure 6** (next page) shows, only 16.7% of the 24 schools made gains in both subject areas. One important consideration is that of the schools that fell back in one or more subjects, none dropped to their 1997 baseline levels. Because these schools made tremendous gains the previous year, it is not surprising that not all were able to sustain those gains. For a complete picture of how schools are performing, a more accurate measure is an average rate of change over two or three years.



Also of interest, although 29% of schools dropped in both reading and math, schools that declined in only one subject did so more frequently in math than in reading. (**Figure 7**) Most principals we spoke with had a simple explanation for declining mathematics scores: they spent less time on math than on reading and writing, and when they focused on mathematics they put more emphasis on teaching students how to explain their answers than on mathematics computation. Some devoted attention to implementing a new math program to which teachers needed time to become accustomed.



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Curriculum changes may have disrupted some schools' progress. Many elementary schools we studied adopted new curricula in math or language arts in the past two years. While the principals almost universally considered the changes necessary and appropriate, the adoptions often proved disruptive. Teachers needed time to learn how to implement the new curriculum and integrate it with existing instructional strategies. While there may be long-term benefits from adopting materials that are more relevant to the state standards and to the expectations of the WASL, they may not be readily apparent in the early stages of implementation. One principal explained this tension:

> *"Last year we adopted a new language arts curriculum. Although it's much more aligned with the EALRs, it always throws teachers for a loop to have a new program. They're not as comfortable with it and they aren't as familiar with the assessment pieces of the curriculum as they were with the other materials."*

Year to year changes can be misleading. Elementary school principals frequently expressed concern over measuring school performance by year-to-year changes in test scores given that each year's results reflect a different cohort of students. While it is difficult to know how much schools can reduce the cohort effect, many schools raised concerns about the following cohort issues:

- **Small samples**: In many cases, particularly in rural areas, the sample of 4th graders who take the test is very small. Minor changes in the 4th grade student composition with regard to English language proficiency or special needs status can lead to noticeable changes in the percentage of students meeting standards.

- **High mobility**: Many of the study schools face high student mobility within and across years. In some schools, principals reported within year mobility rates as high as 65%. Some of these principals struggled with the question of whether the test results for 4th graders who entered their school during that same year were an accurate measure of the school's progress. The effects of school efforts to integrate curriculum and instruction across multiple grade levels are often lost on students' transferring into the school shortly before the tests are given.

Schools that sustained improvement made deeper and more consistent changes.

Improving schools worked to overcome barriers. Regardless of barriers such as high mobility, improving elementary schools, like middle schools, accepted these realities and targeted their efforts to overcome these challenges. One principal outlined a multi-pronged approach to addressing mobility rates:

> *"Our mobility has gone down partly because we've tightened up on student discipline. We've been really intentional talking with parents about the importance of keeping their child in the same school. Before any parent leaves, I make a point of explaining to them that they have the choice of keeping their child in this school or going elsewhere. I explain that the buses can bring their children here from other neighborhoods. We've also started a looping program (where a teacher stays with the same group of students for more than one year) that has helped. They've already developed a relationship with the teacher, so they're less inclined to leave."*

Improvement is a way of life. Schools that sustained improvement made deeper and more consistent changes. Elementary schools that were able to sustain their impressive gains from last year shared certain characteristics that went beyond the common strategies we identified earlier in this report. For these schools, improvement was not a one-time effort, it was part of the culture of the school. Teachers and principals continuously analyzed tests scores and student needs, got better at eliminating instructional activities that did not contribute to the school's primary goals, and refused to become complacent.

Schools that sustained their gains did not sit back and relax. They looked deeper into instruction and individual students' needs to see how they could keep improving. These schools:

- Got better at analyzing data and homing in on areas of need.
- Did deeper analysis of individual students needs.
- Increased the use of on-going assessments that reflect WASL expectations.
- Introduced changes in curriculum and approaches to instruction and learning in earlier grades.

One principal described the process this way:

> *"We share our successes in formal ways through staff meetings and have looked at our weaknesses and dissected them to help us make changes. We've tried to identify the materials teachers need to help them make changes. It's not just a once a year thing that we talk about – it's brought up nearly every week in staff meetings and team planning."*

Schools that were successful in addressing the issue of varied student skill levels took further steps to incorporate instructional changes beyond the 4th grade. Teacher planning time and staff development included improved articulation of the instructional expectations of primary grade teachers to prepare students for the demands at higher grade levels.

> *"When we started looking at what students are being asked to produce in the math area, we found we weren't giving them what they needed in terms of asking them to explain how they arrived at their answers, writing down their solutions and justifying how they arrived at an answer. We are now starting to ask students to do that at an even younger age – even before they can write it down, we're asking them to tell us how they arrived at their answers."*

Some schools, on the other hand, assumed that the changes they made last year would suffice. But this year, they had a different group of students with different needs. Some schools recognized these needs and adjusted their strategies to meet them. Others excused lower performance as a result of more challenging student needs. As a principal at one school that was unable to sustain gains put it:

> *"Our staff expected (scores to fall). They felt that last year's group was lower in ability than the year before. They were particularly slow in math."*

Focus can always be sharper. Sustaining schools recognized the need to continuously sharpen their educational programs. They:

- Further pared non-essential programs.
- Developed greater creativity in using time and money.

Greater familiarity among teachers with the EALRs and the WASL expectations spurred sustaining schools to further refine their lesson plans.

"Our teachers are getting better at weeding out things that are not necessary to teach and better at focusing on things that need to be taught. We're also getting better at integrating social studies and science into the reading and writing program. Because there is not enough time in the day to teach all of the subjects separately, I've allowed them to focus on the three main subjects and then to integrate the other subjects - so they are always writing and reading as a means of learning social studies and science."

Principals at these schools regularly reviewed lesson plans to make sure they were focused on areas the school needed to improve. In many cases, pressure that initiated with the principal translated into peer pressure among staff to share lesson plans and strategies, such as the approach taken at this school:

Sustaining schools continued to find ways to carve out time for individual student assistance. Many schools experimented with creative uses of funds or staff to make adjustments to the delivery of instruction to struggling students.

"In our (grade 3 and 4 literacy) program, there are two adults in a smaller classroom of 17 students. It allows more freedom for the teacher to select various methods to teach children in their class to best suit their individual needs."

Some schools were unable to make these deeper changes. Other made these changes only in one area, so another subject suffered, or the level of change in the classroom was not as intense. As one principal at a school with dropping scores noted:

"It's been a school-wide focus, but accountability was not very tight. I didn't go around to check plan books to make sure they were including lessons in writing that were appropriate to the WASL."

Complacency is dangerous. Sustaining schools did not let down their guard after making gains. They continued to push expectations beyond a comfortable level and did not become complacent.

"Because there's a lot of pressure on this school to improve. There's also a lot of 'we've shown we can do it, let's do it better.' We're beyond making excuses about our kids."

Some schools were relieved by success last year and let down their guard. After putting in long hours -- often for no extra pay – during the second year of testing, some schools

may have assumed that they could afford to ease up during the third year. In some cases, teachers donated less time and principals let up on pressure to improve. Some districts assumed a hands-off approach because of the prior year's demonstrated success. As one principal described:

> *"The first year, the scores were very low - that next year, teachers were very concerned about making a big gain through purposeful teaching. This past year we slacked off a bit just knowing that we were on the right track. I think maybe we were feeling a bit too comfortable."*

The experience of the elementary schools that were able to sustain improvement underscores an important lesson: it's not enough for a school to make a superficial change in the way the school operates or to make a one-time shift in strategy and claim that "we're working hard and doing everything successful schools are doing, but we're not seeing results." The strategies, used both in elementary and middle schools. must seep into the everyday culture of the school and translate into deeply ingrained instructional changes in every classroom.

Low-performing schools doing one or two things on the list of improvement strategies or doing them in name only should not expect to see any dramatic evidence of improvement. Real change will be a result of getting out of the "sampler" mode of trying a little of everything, and getting instead into the habit of committing to doing something deeply, school-wide, for a long period of time, and at consistently high levels of intensity.

The experience of successful rowers offers a useful analogy. Winning rowing teams do more than row in unison. They constantly analyze individual skills that need more attention and training, receive continuous feedback from their coach, and adapt their techniques with changing weather conditions. Winning rowing teams do not kill themselves to win one race. They do not rely on the strength of a few individuals on the team or on the advantage of an especially good boat. Successful rowers work on how to make every stroke count through efficient strokes and coordinated effort. Most importantly, rowing teams that win consistently do not expect that one successful race is reason to stop working to get even better.

Like winning rowing teams, effective schools are never satisfied that they have done enough. They pace themselves and make every teaching minute count.

Challenges Ahead: How to Make Standards Stick?

Despite the fact that many elementary schools were able to maintain their impressive gains from last year and overcome challenges, principals and teachers raised sobering issues regarding the challenge of sustaining improvement. Middle schools in our study this year echoed these challenges as they looked to the future as well.

A number of factors threaten to limit the extent to which these schools and others like them will be able to ensure that all of their students meet and exceed state standards. Principals and teachers cite the following areas of concern:

- Finding tools and time to analyze school needs.
- Staying focused on essential skills without sacrificing learning in other important subject areas.
- Making sure pressure on principals and teachers, especially 4th and 7th grade teachers, does not lead to frustration and burn-out.
- Making sure state and district rules do not interfere with individual school needs.
- Finding the right balance between principal authority vs. staff autonomy.
- Dealing with staff and administrator mobility:
- Getting parents and students on board and keeping them engaged.

Finding tools and time to analyze needs.

Most of the principals we interviewed said they could target their efforts much more effectively if they had better information. They also pointed to having little time to undertake the kind of on-going, thoughtful analysis of their needs, which they believe necessary to make major improvement. While some schools received valuable tools from the state and district to do this analysis, too many found the assistance they received to be inadequate, inappropriate or just too late. One principal described the frustration of getting test scores back too late for immediate problem-solving:

> *"The feedback from the state was too slow...It wasn't direct enough for (teachers) to even impact or change what they were doing in the classroom the next day. The WASL is not created yet to improve instruction because it doesn't come immediately back to the teachers who can immediately make a shift tomorrow.*

And until it does, it's only something that I pass onto the next teacher that didn't even teach the class."

Of particular concern to virtually all principals was the discontinuation of the State Learning Improvement Grants (SLIG). Prior to 1999, schools received a set amount of money from the state to undertake professional development activities aimed at improving student achievement. This year, in the place of SLIG, districts instead received state funding for three Learning Improvement Days (LID) during which teachers were paid to work on staff development issues. According to many of the principals we interviewed, this shift from unrestricted funds to highly restricted funds inhibited principals' ability to use staff development funds creatively and strategically. Last year, many schools also faced greater restrictions on their use of staff development funds as their districts tightened control over those resources. Principals across the board lamented the lack of flexibility over their staff development resources. One principal explained the problem:

"The loss of SLIG money hurt us...So now I have (3 Learning Improvement Days) but I need a consultant to come in and I don't have the money to buy the consultant...The three days are nice for curriculum work and that sort, but for that real change..."

Staying focused on essential skills without sacrificing learning in other important subject areas.

Many schools noted that the standards and tests provided an important focusing mechanism for their school-wide improvement efforts. Nevertheless, they worried: Are we sacrificing learning in one area for the sake of another? Will we be able to continue to focus our efforts as more tests come on line? If we focus solely on the WASL, will our students have all the skills they need to succeed in high school, college and beyond? Two principals described the schools' struggles to prioritize:

"Our staff development is reading focused. We don't spend as much time on math and writing. It all goes together, but when you're so focused on reading, you can't spend as much time on those... We're going to do a math adoption district-wide next year. We know we have a lot of work to do in both of those areas. We try to integrate social studies and science because they can't be treated in a compartmentalized way. We haven't been able to fit these in as well as we'd like to. Art is way on the back burner. We're starting to bring science back out because the new tests in science will be up soon."

"We don't do science and social studies anymore, which is sad."

In an attempt to hone their efforts, schools often chose to focus on one or two particular areas, such as reading or writing. While this gave them an opportunity to deepen their efforts, some schools saw their scores drop in other areas, like math, as a result. Some of this "see-sawing' in emphasis is to be expected as schools learn to set balanced priorities and use their time more wisely. Learning how to emphasize mathematics, reading, and writing while not abandoning other subjects is an important tension to recognize and address, but it is not reason to think the new standards will necessarily drive out all other important learning out of the classroom.

Long-term improvement will require schools to deepen their focus on the essentials covered on the WASL without losing ground in areas that are not a priority at the time. They will also need perspective to keep in sight their goals and expectations for students that extend beyond those tested on the WASL. Many of the schools we studied are learning how to create that balance by making sure they teach WASL-related skill and content areas at the same time they teach other subjects, such as art and fitness. These "best-practices" are important to emphasize and share so that schools know it is possible to make sure their students are meeting standards and still receiving a well-rounded education.

Making sure pressure on principals and teachers, especially 4th and 7th grade teachers, does not lead to frustration and burn-out.

Thus far, pressure to improve WASL scores has often come from within the school building, from teachers and principals who feel responsible for their students' success. But that "internal pressure" was commonly spurred by outside expectations generated by newspaper reports of test scores, district threats, or the belief that the state accountability system will come into effect soon. For these schools, the level of pressure they are experiencing is a critical factor in their success.

Principals noted, however, that with each passing year the intensity of the pressure is increasing. Results are being made public; schools' scores are more closely scrutinized by districts, parents and their communities; and the state is moving closer to defining how schools will be held accountable for their results. Our interviews with elementary schools suggest that there is a strong danger that the pressure, now predominantly a healthy means of spurring improvement, can lead to teacher frustration and burnout, especially at the 4th and 7th grades where much of the testing is administered, if it is not

managed well. At two schools, the principals reflected on the weighty internal and external pressures:

> *"Life revolves around the WASL - there's a tremendous amount of pressure - we set goals that are extremely high (for example, 100% of our 3rd graders will be able to read). I think many teachers think they are unrealistic goals, particularly when things beyond their control influence student performance, such as students moving to the school a few weeks before the test. It's a healthy thing, but it wouldn't be hard to push it over the edge. It's a pressure cooker. More than one (teacher) has mentioned wanting to transfer out of the 4th grade."*

> *"We're not always happy about the way the media portrays what's good and what's not good. If the public had the concept of how much time we spend to make improvements... One statement by the media can make it seem like we're not doing anything to help our students."*

If schools are to make sustained gains, they will need to manage their efforts in ways that encourage teachers, students, principals and parents to take on their fair share of responsibility for student achievement. Schools that have managed to find this appropriate balance might help by serving as exemplars. Grade-level exit standards can also help spread responsibility so that teachers at the grades tested do not bear sole responsibility for student performance on the WASL.

Coping with state and district policies and programs.

Successful elementary schools this year highlighted the importance of sustained attention to a coherent plan of action. Often, however, individual schools' efforts are impeded by changing state and district policies and programs that either divert attention from key school priorities or interfere more directly with their strategies. Well-intentioned but unfocused policies can do more harm than good. For instance, when elementary schools themselves determined the implementation, timing, and the content of a new district curriculum adoption, the disruption to school improvement was minimal. However, in some schools, the timing of the district-wide adoption did not suit the school well because it compromised or forced premature abandonment of their efforts to improve instruction in particular areas. Several principals explained:

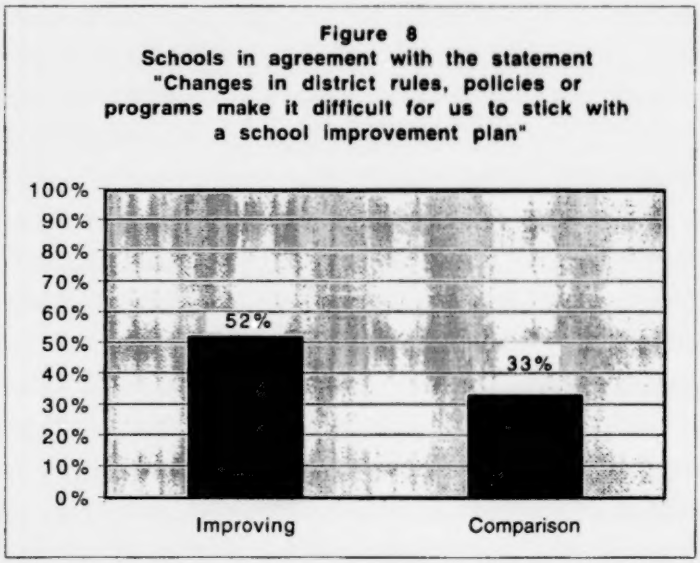
> *"Our target was to try to get 50 to 60% meeting the standard - we were so thrilled that we got there. We thought that what we'd been doing in reading and writing was appropriate and on target. But then, the district implemented new*

math curriculum - everyone agreed it would be a good change, but it meant that everyone's attention and energy went to math instead of the other areas. The shift to focus on math was based on the district's decision to do so, not based on any decisions we made in our building. Our scores showed us we were going in right direction – we wouldn't have changed focus if not for the new curriculum."

"We had a different Title I person in our building last year from the year before. First we had a math person and then last year we got a language arts person. This changed the emphasis of service availability. Our school had no control over this."

"[District run staff development] is all targeted into a dizzying array of expectations and divergent responsibilities."

As **Figure 8** shows, 52% of improving middle schools are wary of district actions that threaten their ability to sustain improvement. A possible interpretation of this chart is that the schools that have designed programs to address their specific challenges are most concerned about mandates that do not match their needs.



To allow successful schools to pursue coherent strategies, state and district policies must provide appropriate levels of flexibility, support for improvement, and incentives to stay the course with a promising plan, rather than relying on one-size-fits-all approaches. The most critical thing a district can do is to distinguish schools that are self-directing from those that are not, and leave the former alone. District activism is necessary for schools that are stuck, but it is not always a good general policy.

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Finding the right balance between principal authority vs. staff autonomy.

Developing and managing a school-wide improvement process is no small feat. When asked what challenges they face, principals of improving and comparison schools alike focused on a central dilemma: How to give teachers the level of autonomy they want and need to make improvements in the classroom, while at the same time pursuing a coherent whole school effort aimed at a few key goals. Many principals we spoke with identified the steps they felt were necessary to make improvement, but were simply unable to get all the teachers in the school to follow that strategy. As one principal from a comparison elementary school told us:

> *"I'm living with an existing process where each teacher uses the money for staff development in the way they see fit. We lack the ability to provide a cohesive staff development program. We have an 'everybody for themselves' program."*

Strong leadership alone may not be enough to build a unified instructional strategy. Without the freedom to hire personnel who believe in a school's vision and goals, a principal must accept some staff who will not be active contributors to the improvement process. Similarly, without the leverage to dismiss staff who are not contributing positively to student learning and school improvement, the principal must rely on persuasion, peer pressure and wishful thinking to bring every teacher on board. As one principal explained:

> *"We see that we've got teachers that aren't making the efforts to do the job better and we're quite frankly powerless to do anything about that...You can go a long way working with someone who is trying. But when you get some folks -- and every building has them -- when you get the folks that just say, 'I'm untouchable,' the kids are wasting their time."*

Improving schools in our study highlighted the importance of school-wide collaboration in pursuing and reaching their goals for students. Addressing the controversial but key issue of how much control principals should have over staff will be a critical factor in determining whether more schools can achieve that kind of success. To get there, some schools will need directive leadership from a principal, while others can make progress via consultation and collaboration. There is no one answer, but it is clear that the two poles of "authoritarian leader-sullenly compliant staff" and "quiescent leader-staff each doing their own thing" will not work. Again, districts have to be able to judge whether a

school is making progress regardless of its leadership structure, and intervene with training, facilitation, or staff change when there is not a productive environment of collaboration.

Dealing with teacher and administrator mobility.

Schools in our study made improvements in spite of high levels of mobility among teachers and especially principals. For some schools, however, the instability created by these changes forced them to spend time revising and revamping their improvement strategies rather than deepening efforts already underway.

> *"So much of what we've had to use our staff development time (for) has been to kind of re-group after every administrative change, after each new influx of teachers. We're in our fourth year, but I'd like to say we're really in the middle of our second year... We're hoping to get to the point where we have enough stability in our staff that we can build on things that we've done every year."*

Some change in staff and leadership may be good – for instance a new principal with the vision and skills to lead a school through the improvement process, or a new teacher who brings a particular skill to address students' needs. Unfocused or unanticipated turnover, however, can be detrimental to the motivation of teachers and the effectiveness of individual school's efforts. District policies, for example, often exacerbate the leadership turnover problem when district officials move principals from one building to another in an attempt to "fix" a low-performing school. Transferring in a new principal sometimes helps and sometimes does not; but it frequently disrupts the school that the principal has just left, and thus creates a new problem. The lowest performing schools have the most unstable staffs. If they are to improve they need some opportunity to hire and keep the teachers who are key to their improvement strategy. Schools need help minimizing the amount of unfocused and unanticipated turnover and moving forward in spite of changes they cannot control. District programs to reduce mobility can provide that assistance.

Getting parents and students on board and keeping them engaged.

Virtually all principals at both the elementary and middle school level are searching for ways to engage parents in school improvement efforts. Schools that made gains both this year and last made concerted efforts in this area. They reached out to parents, educated them about the new standards and tests, and asked them to monitor students' progress, help with homework, and encourage students to take the WASL seriously. This was not

an easy task and even these schools admitted they did not always see the results they have hoped for.

For all students to meet standards, parents must play an active role. Schools need ideas on how to reach parents, especially in the middle grades where the hurdles to sustained involvement seem greatest. When we asked principals what one thing they would change to improve student achievement in their school, the most common answer was getting parents to play a more active role in their children's learning.

Schools are also struggling with the challenge of reducing student transfers in and out of the school. Some of the more successful schools were adopting or creating strategies to address this problem, such as building better personal connections between students and teachers and working with parents to understand the importance of keeping a student in the same school for extended periods. And to address an equally difficult problem, student apathy, schools are adopting aggressive outreach and intervention strategies, such as making sure students understand why it matters how they do on the test. Student indifference to state tests should not be considered an excuse for a school's poor performance.

District programs and supportive policies, such as allowing families more choices in school assignment, providing ways for schools to share effective strategies to keep parents and students engaged in improvement efforts, and making sure that performance on the WASL carries real consequences for student's future employability and academic success could help buttress these effective school-level outreach efforts.

Looking to the Future: Recommendations for Action.

To initiate improvements and make them stick, schools will need help from people at all levels concerned with the future of Washington's students. We highlight some of the ways district and state level actors, in particular, can support schools taking the first and continuing steps toward improvement.

Recommendations for district level actors:

District level actors, including school boards, superintendents, district administrators, and unions, can help schools achieve the kind of improvements needed to ensure all students reach the new state standards. They are close enough to schools to understand their unique needs, and have the capacity to provide support for initiatives that individual schools may not be able to accomplish on their own. District level actors can:

Facilitate school-level problem-solving. Schools that made gains highlighted the importance of taking time to do thorough and on-going analyses of their needs. But many schools expressed concern over the lack of resources to do this successfully. District level actors can help facilitate school level problem-solving by providing tools and time for analysis. This may mean working out new contract arrangements that lengthen the school day for staff, providing greater flexibility in the way that individual schools use their staff development dollars and time, or making sure schools have access to the analytic tools and materials that make the most sense for their circumstances. District actors can also build bridges between schools so that this problem-solving is better informed, for instance by paying elementary teachers while they meet and share ideas across schools, or giving middle schools time and resources to work directly with their feeder schools.

Recognize that schools have unique needs that may require different instructional programs, schedules, and resources. Once schools have identified their unique strengths and weaknesses, they need to be able to act accordingly. District level actors can help by supporting schools to use different instructional programs, schedules and resources based on sound analysis of their situation. While uniformity across a district's may be valuable in some areas, schools need to be able to move beyond a one-size-fits-all approach to match their efforts to the needs of their students, parents and staff.

Stabilize leadership, staff, and student assignments so schools can pursue coherent strategies over time. Constant changes in leadership, staff and students can hinder

schools' efforts to pursue coherent strategies for improvement over time. District level actors can assist schools' long-term improvement efforts by resisting the temptation to remove principals from schools making gains, and by providing principals and schools with greater authority to hire personnel who believe in the school's mission and practices, thus increasing the likelihood that those hired will want to stay with the school for the long haul. Inevitably, some turnover will still occur, however, and schools will need help minimizing the overall impact. Again, district level actors can help by creating clear and compelling criteria for leadership and student assignment changes, sharing those criteria with families and schools, and sticking to them despite pressure to do otherwise. District personnel, principals, and union leaders should also ensure there are reasonable mechanisms to allow principals to remove teachers that are not contributing to the school improvement process.

Recommendations for state actors:

State level actors, including state legislators, the A+ Commission, and the Office of the Superintendent of Public Instruction, have the capacity to help schools and districts realize their potential for major improvements in student achievement as well. To do so they should:

Give schools, especially those that need most to improve and have sound strategies for doing so, greater flexibility regarding rules, dollars, staffing, and use of time. Improving schools in our study highlighted the importance of targeting their resources to meet their unique needs. Without the flexibility to direct their dollars, staffing and time toward key schools priorities, schools are forced to adopt strategies driven by the constraints of their resources rather than the needs of their students. Greater flexibility need not mean schools have 'carte blanche' to do anything they like; but it does mean that given a sound strategy for improvement, schools have the freedom to use their resources in creative ways.

Recognize that improvement is not likely to be linear, but don't let the challenges become excuses. As our study of elementary schools illustrates, few schools were able to make dramatic gains two years in a row. Most schools found it difficult to focus their efforts on all areas at once, and saw their scores slide when energy and attention was diverted to a new priority. State actors can help schools keep these changes in perspective by recognizing that long-term improvement is likely to come slowly and steadily with some dips along the way. Equally important, however, state actors must be insistent that schools keep up the intensity to improve, rather than resting on their laurels or making excuses for students' performance.

Anticipate more challenges, not fewer, as more tests are required. Schools that made gains worked diligently to focus their programs so students would receive instruction that prepared them for the WASL. The honing process was not simple, however, and required teachers to make tough choices about what to emphasize during the limited time that they have with students. As more tests are required, state actors can help schools by anticipating more challenges, not less, in balancing larger numbers of requirements. They can aid schools by offering advice on how to keep focused on the essentials without losing track of goals that extend beyond the areas tested on the WASL. They can also help schools access relevant training and other resources, and share advice on how to engage parents and community as partners in the improvement process. Most importantly, they can help schools' efforts by setting realistic, yet challenging, goals for accountability, giving schools enough time to make meaningful changes while maintaining the urgency for making sure all Washington state students can meet the state standards. As high school WASL testing becomes mandatory, we must all anticipate the problem that high schools will have in motivating students. Middle schools are demonstrating that this has to be recognized as a school responsibility (and an indication of school quality) not an excuse.

Conclusion

The findings from our second-year study are both hopeful and sobering. They confirm that schools can make a difference, and they provide important information about what we all need to do to remove roadblocks for sustained improvement over time. They also make the point that achieving the goal of state-wide school reform – to ensure that all students are able to meet high expectations – will require much more than just teachers and students working harder or superficial changes in school organization. It will require deep and sustained efforts that fundamentally change classroom instruction and schools' organizational character, as well as effective district oversight and resource allocations.

Many important questions remain unanswered, however.

First, we have identified common characteristics of improving schools, but we do not know that these are the only factors that matter in improving school performance. For example, more research with a greater number of schools is needed to identify the most effective curricula and teaching methods.

Second, we do not know whether all schools can do the things that improving schools are doing. Some schools will likely not be able to pull together and act as a team. Others will do so only superficially, and will not be able to reach the point where they are implementing these strategies deeply. At this time, we have limited insight into the barriers that prevent stagnant schools from moving forward. We also do not know if the attributes of successful schools are common or rare among all schools in Washington State. The fact that some schools are improving does not mean that under current conditions all or even many schools will improve.

Third, we do not know what it will take, in terms of additional resources and effort, for schools to get all students up to standard. Researchers who follow standards-based reform nationwide suggest that initial bursts of improvement are usually the result of schools taking the easy steps first and that scores typically level off as the changes required get harder and more expensive.[6] Sustained improvement for all students may require significant structural changes or increases in funding for schools to make deeper and more lasting changes.

[6] Hoff, David. "Testing Ups and Downs Predictable." Education Week. January 26, 2000.

Finally, questions still remain regarding the influence of district policies on schools' effectiveness in meeting the new state standards. We have reason to believe that improving schools cluster in some districts, but we do not yet know very much about what these districts are doing differently. Future studies should address these issues.

Some elementary and middle schools throughout Washington have taken tangible steps to address the new expectations for learning outlined by the state since the passage of the Education Reform Act in 1993. Progress toward meeting those standards is underway but much work remains to be done. We hope that this report will serve as a useful guide for school, district, state and community actors to sharpen their efforts to ensure the academic success of all students.

Appendix A

Studying gains/losses in WASL scores:
What can account for change?

The Washington Assessment of Student Learning tests have been given to 4th graders since 1997 and to 7th graders since 1998. Considering only mathematics, between the first and the second year of 4th grade testing the average percentage of students meeting the standard increased from 21.4% to 31.2% and 83.6% of the schools increased their "pass percent" from the previous year. From 1998 to 1999, the average percent passing the test went from 31.2% to 37.2%, with 70.2% of the schools improving on their previous year's performance. Improvement was less marked with regard to the first and second year 7th grade mathematics testing: between 1998 and 1999, the percent meeting the standard went from 19.3% to 23.5%, with 72.7% of the schools showing improvement to one degree or another. With only about a third of 4th graders meeting the standard and less than a fourth of 7th graders, these scores certainly aren't satisfying to anyone. However, many see signs of hope for the future in the fact that such a large number of schools register some improvement and the average percent meeting the standard has increased.

Components of change in test results

In determining whether to be dismayed by the poor showing of students on the standards-based assessment, or to be hopeful about signs of improvement and change, one question is particularly important: What can account for such improvement? Are the gains due to changes in the state's demographics? To growing familiarity with the test? To random fluctuations of "good classes" and "bad?" To real changes in classrooms and students? All can account for some of the change, but the possible causes reduce to three: (1) the school learning curve; (2) significant changes in the children being tested; and (3) actual changes in student learning either caused by, or coincident with, the introduction of standards and accountability testing.

At the request of the Partnership for Learning, the staff of the Center on the Reinvention of Public Education explored ways in which student and school performance have changed over these initial years of WASL testing and sought to identify some of the reasons for these changes. The purpose of this paper is to discuss the possible reasons for improvement in test scores and describe the ways the CRPE staff selected schools for

study so as to increase the chances that the schools studied did, in fact, make changes that improved student learning.

The first possible explanation for improved test scores is the school learning curve. The initial years of testing with any new instrument are years of learning--years when teachers struggle with how to prepare their students and students struggle to understand new forms of testing. Research has shown that during the first three or four years that a new test is used, scores rise significantly as teachers and students become familiar with the new test.[i] But then the scores level off, giving the impression that progress has slowed or even stopped. These first years are thus difficult years for gauging how schools and students react to new standards and a new test. The prudent path might be to put off any close look at improving schools until there are more years of testing behind us and new policies and procedures have settled in. But prudence, in this case, would also mean taking the chance that promising approaches that work in increasing student learning might be overlooked or ignored, or that self-defeating practices might be continued and solidified. Care needs to be taken, then, to assure that improvements in test scores were well beyond that experienced in the same kind of schools taking the same test so as to assure that improvements are not simply reflective of the learning curve.

The second possible explanation for improved test scores is, quite simply, the fact that different children are tested each year and some kids are just smarter (or at least better test takers) than others. The WASLs, like almost all standards-based tests used today, do not test the same students over time (an approach that would permit us to know how much a given student learns from year to year) but, rather, test different cohorts of students within the same institutions in the same grade each year. The tests are a snapshot, taken at one point in time, as different groups of children pass before the 4th, 7th and 10th grade test cameras. The whole theory behind using test scores to hold schools accountable for the learning of their students is that schools can make a difference in what students learn; that their native ability (or lack thereof) is not all that affects learning and achievement. Studies dating to the 1960's have found that family and demographic characteristics of students powerfully affect how much they learn and how they perform in school. If what the student bring with him to the school is the primary predictor of achievement, then the school itself may be irrelevant and testing even more so.[ii] In fact, holding schools accountable for student learning under these circumstances would be patently unjust.

Some teachers and school administrators appear to support this position, with one documented case being Kentucky. That state has had a standards-based system of curriculum guides and assessments in place for several years and in both 1995-96 and 1997-98, teachers were queried by RAND about the factors effecting change in the students' scores on the State's standardized test. When asked the first time what they

thought contributed "a great deal" to test score gains, 26% of 5th and 8th grade math teachers said that changes in the student population could account for changes in the testing results; two years later, the percent of teachers saying this had risen to 57%. What else did they see accounting for the changes? Many reported that testwiseness (including familiarity, test-taking skills, and practice tests) contributed a great deal to score gains. Very few thought that actual increases in student learning were responsible for improved test scores.[iii]

Ironically, although the Kentucky teacher didn't see a strong relationship between the state's new standards/curriculum/testing reform efforts and increased achievement in their students, the performance of Kentucky's students on national norm based tests such as the NAEP has also risen, indicating that improvements are being made. With no measurable demographic changes across the state, and none within schools that would account for the gains being experienced, the natural conclusion (and the hopeful one) is that the schools themselves are making a difference, whether the teachers see this or not.

That schools do make a difference is the tentative conclusion of the Grissmer, et al, who used two different national tests taken by thousands of young people to identify those personal and family characteristics most highly correlated with performance. They found that the most important family influences on student test scores are the level of parental education, family size, family income, and the age of the mother when the child was born. Using this knowledge, the research team predicted changes in student achievement on a national test (the National Assessment of Educational Progress) based on changes in the demographic characteristics of families between the 1970s and the 1990s. What they found was that changes in family demographics could account for all of the increases in non-black achievement over the period studied, but that these same demographics could account for less than half of the gain for black students. They concluded that "the remaining part of the gain presumably might be accounted for by factors outside the family." In their view, the most likely candidates for explaining this difference are "some combination of increased public investment in education and social programs and changed social policies aimed at equalizing educational opportunities." In other words something at the school, or even societal, level played a role in improving student scores beyond what would be predicted by changes in the education, income and other characteristics of the students' family.[iv]

Researchers looking at score increases in such states as Connecticut, Texas and North Carolina, as well as the City of Chicago,[v] have all identified positive results of their reform efforts on test scores in schools--results that could not be accounted for by changes in the make-up of the students in the schools. Of particular interest is the ten-year study of schools in Louisiana. [vi] Researchers in that study found that school effects predicted 13% of individual-level students achievement, while teacher effects accounted for another 11% of the variance. In their view, "The cumulative effect of such

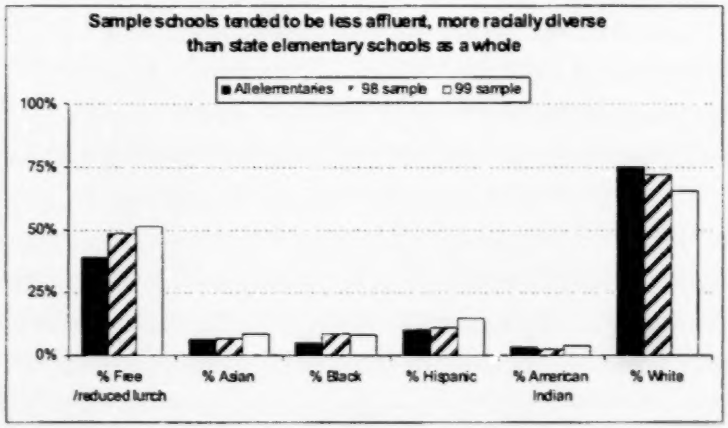
contributions is substantial, especially if a student stays in a school that retains its effectiveness status and teachers over time." In other words, schools do make a measurable difference and states with long histories of standards-based guidelines and assessments are beginning to see the positive effects.

Selecting samples for studying changes in WASL tests

Clearly, the individual student is still the most important element in the testing process, and what she or he brings to the school and to the test effects everything else in the process. However, there is growing evidence that schools can take action in ways that can assist students from all types of backgrounds to achieve at a higher level. In looking at the changes in percentages of students meeting standards in schools, it is important to identify those schools that (1) improve at a rate exceeding that accountable to the learning curve; (2) achieve beyond what would be expected given the demographics of the school and the community; and (3) add something measurable to the learning the child brings with him/her. Using a combination of statistical modeling and site-visits, the CRPE staff hoped to (1) increase the chances of finding schools where real change was taking place and (2) identify those approaches that improving schools seem to have in common. The way to do this was to find schools where student scores rose from one year to the next and where these rises were most likely to be due to school rather than to student or community characteristics. In the two years of study so far, there have been three sample selections: the 1998 and 1999 4th grade samples and the 1999 7th grade sample. Each was selected using similar methods, but with some important variations as described below.

<u>1998 and 1999 4th grade samples</u>

- In 1998, elementary schools were selected for interview if they gave evidence of "adding value" to what their students brought to the school in terms of learning.[vii] That is, schools were selected for further study if they exceeded what would



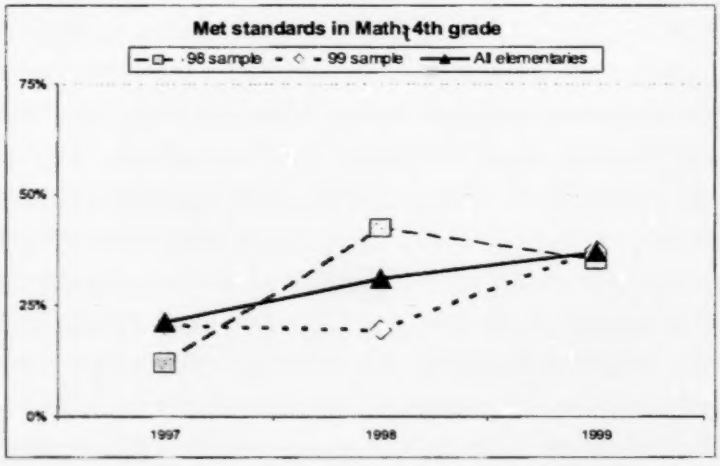
have been predicted given the school's demographics and if they gave evidence of higher need than schools in the state system as a whole. In other words, these schools had experienced a change in scores both beyond the mean for the state as a whole and significantly beyond what would be expected given the particular challenges faced by the given school. A matching "comparison" group of schools was also selected for study, based on their similarity in demographics and initial test scores to the "added value" schools.

- In 1999, another group of schools was selected for interview. In this case schools were selected that, like the 1998 sample, had increased their percentage of students meeting standards to a point significantly what would be expected given their initial test scores and their demographics. This new sample also had to meet an additional standard: they must not have increased the percentage of students meeting standards in both math and reading between 1997 and 1998, while showing such an increase between 1998 and 1999. No comparison sample was selected for this second round of study.

- As the chart above indicates, sample schools in both 1998 and 1999 did indeed serve a larger percentage of students with indicators of need than elementary schools in the system as a whole. Not all schools were high poverty or highly diverse, but on average they faced more challenges than the norm.

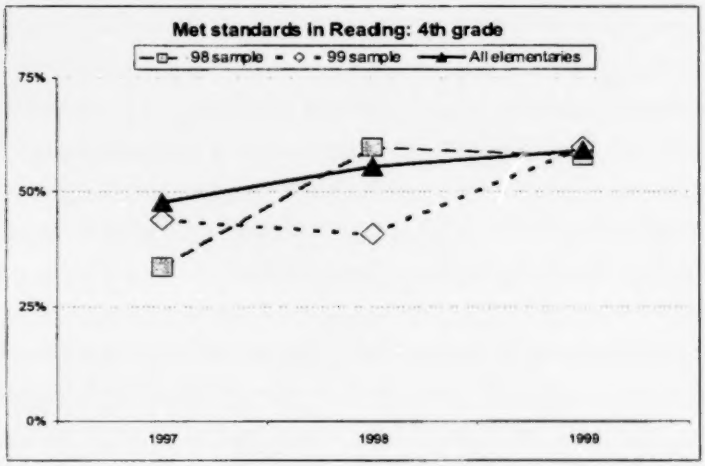
- Besides the new schools selected for interview in 1999, the study team also revisited the sample schools from 1998. As the charts show, the three groups of schools (all elementary schools, the 1998 sample and the 1999 sample) showed different patterns of WASL test scores:

1) there was a gradual improvement over the three years in the percentage of 4th graders in all schools who met the standards in reading and math;



2)

the 1998 sample schools evidenced marked improvement in percentages of students meeting the standards in 1998 over scores in 1997, and on the whole maintained that level in 1998; and

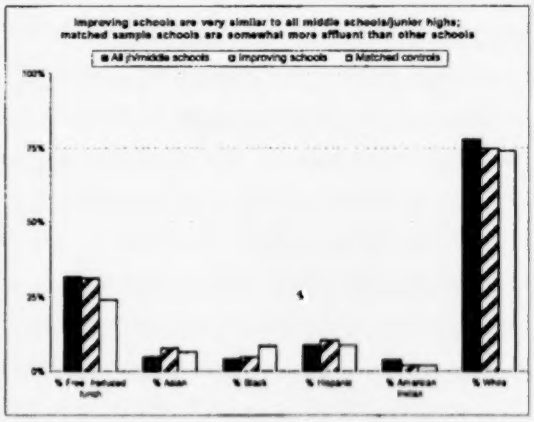


3)

the 1999 sample started at about the state-wide average in 1997 and stayed at that same level in 1998, but experienced sharp increases in numbers of students meeting the standards in 1999.

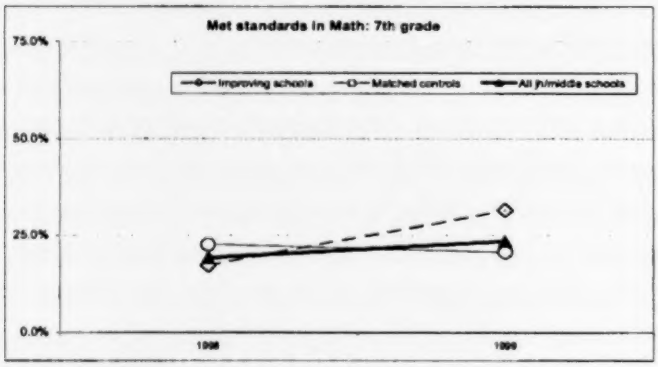
7th grade samples

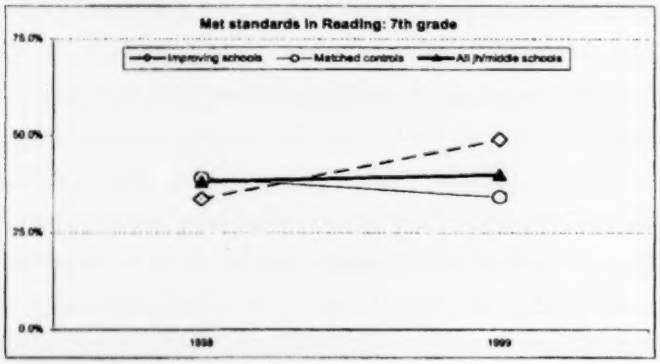
- Only one study has been done of the middle schools and junior high schools because 1999 was only the second year in which the tests were given at the 7th grade level. In the case of 7th grader scores, schools were selected for further study that promised to have larger than average numbers of high need students and that, in spite of this, showed significant improvements in student scores between 1998 and 1999. Another group of schools were selected that were in the same districts as the improving schools and had the same demographic characteristics but in which there was no increase in percent of students meeting the standards between the first and second years of the WASL. The accompanying chart indicates that approximately the same percentage of students in the improving schools as in the total number of junior high/middle schools were on free or reduced lunch, while a somewhat



larger percentage of students were Asian, Black or Hispanic. The control schools were less likely than the improving schools or all schools at this level to have students on free or reduced lunch, but were somewhat more likely to have more African American students. In general, however, students in the sampled schools were similar to students in the general population and in the control schools in terms of demographic characteristics related to school success.

- Performance on the 7th grade mathematics and reading tests for total, sample and control schools is shown on the graphs below. While there were small improvements in percentages of 7th graders meeting the standards in reading and math between 1998 and 1999, the increases shown by the "improving" schools were well above the norm. On the other hand, the control schools were either identical with the total school population (mathematics) or fell below the statewide average (reading) between 1998 and 1999.





Summary:

- All schools selected as "improving schools" had exceeded the rate of growth in the state by at least one standard deviation. This is significantly beyond the improvement level across the state as a whole.

- Schools selected for further study as "improving schools" had not experienced any major changes in their catchment areas or in the demographic makeup of the schools over the years in which the tests were being administered.

- The pattern of performance on the WASL tests among the interviewed schools indicates that they did, in fact, perform differently from schools in the total state system. This gives hope that the improved test schools did, in fact, signal changes in school performance that reflected increased learning on the part of the students in that school.

Mary Beth Celio
Northwest Decision Resources
Seattle, Washington
April 10, 2000

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[i] Linn, Robert L., *Assessments and Accountability*, CSE Technical Report 490, Center for the Study of Evaluation, National Center for Research on Evaluation, Standards, and Student Testing, UCLA, Lost Angels, CA: Nov, 1998, p. 7.

[ii] Grissmer, Kirby, Berends and Williamson, in launching a major study of student achievement as it relates to changes in family demographics, cited the trend towards using simple comparisons of school scores to assess the quality of teaching, schools and school districts. If, however, the major reason for changes in achievement have to do with changing demographics of the student bodies, then the judgements are bound to be flawed. (Grissmer, David W., Sheila Nataraj Kirby, Mark Berends, Stephanie Williamson, *Student*

Achievement and the Changing American Family. Santa Monica, California: RAND Institute on Education and Training, 1994.)

[iii] Stecher, Brian M., Sheila Barron, Tessa Kaganoff, and Joy Goodwin. *The Effects of Standards-Based Assessment on Classroom Practices: Results of the 1996-97 RAND Survey of Kentucky Teachers of Mathematics and Writing*. National Center for Research on Evaluation, Standards and Student Testing, RAND Education, May 1998.

[iv] Grissmer, et. all, pp. 95-100.

[v] Grissmer, D. & Flanagan, A. *Exploring Rapid Achievement Gains in North Carolina and Texas, Lessons from the States*, National Education Goals Panel, Wash. D.C. Nov. 1998; Bryk, Anthony S., Yeow Meng Thum, John Q. Easton and Stuart Luppescu, *Examining Productivity: Ten-Year Trends in the Chicago Public School*, A Report Sponsored by the Consortium on Chicago School Research, March 1998; Grissmer, D., *Exploring High and Improving Reading Achievement in Connecticut*, 1998.

[vi] Teddlie, C & Stringfield, S. *Schools Make a Difference: Lessons Learned from a 10-Year Study of School Effects*. New York: Teachers College Press, 1993, p. 25.

[vii]In order to locate the schools where changes might be occurring as a result of the WASL testing, the first step for both the 4th grade and the 7th grade tests was to identify the relationships between school and community demographics and school-wide test scores during the first year of testing. Using the reading and mathematics tests for both grade level, therefore, ordinary least squares (OLS) regression equations were estimated for each grade level and both curriculum areas: 1997 Mathematics and Reading for 4th graders and 1998 Mathematics and Reading for 7th graders. This was the same approach used by the National Opinion Research Center (NORC) in selecting outstanding high schools for the *U.S. News and World Report* study. Both the WASL4 and the WASL7 analyses found that the three variables used by NORC were the most efficient predictors of WASL scores, with the adjusted R^2 statistic indicating that the three variables could statistically explain from 41% to 51% of the variance in the outcomes. The three background variables were:

FLPCT:	Percentage of students in the school on free or reduced lunch. Source: OSPI files for the 1998-99 school year.
CMEDINC:	Median income in the county in which the school is located. Source: 1997 U.S. Census estimates by county.
CAVEDUC:	Average education background for adults 25+ (range 1 through 7: less than 9th grade through graduate degree). Source: calculated as a weighted average from the 1990 Census data on the percentages of adults whose highest level of education corresponded to each of the seven levels.

The purpose of developing regression equations to predict WASL scores was to estimate how much "value" was added by a school to what the students bring to the school. Thus, the value added by the school was defined as the difference between the school's actual WASL scores in a particular area/year and the level predicted for that school on the basis of its levels on the student background variables. The

predicted value for a school was calculated by multiplying the regression coefficients for each background variable by the school's value on the background variable and summing the products.

In keeping with the NORC procedures, all elementary and middle/junior high schools in the State were ordered into ten equal-sized groups, ranging from highest to lowest value-added. Again following the lead of the NORC study, a school was considered to have contributed significant value if the difference between predicted and actual scores was within the top four groups or, in other words, in the top 40% of value added.

In addition to value added, the selection process for the second year study included calculating a change score for each school. The difference between performance on the 1998 and 1999 tests in a particular area was calculated and those schools that improved in percentage gain and point gain in both areas (mathematics and reading) were identified and ordered according to their distance from the average change. Thus, high change scores were given to schools that increased their scores by one or more standard deviations above the mean on both tests.

As would be expected, high change and high value added schools were not necessarily the same schools. A school could do better than predicted on all of the tests and yet still not have improved from one year to the next; similarly, a school could be doing only as well or less well than predicted but could gain significantly from one year to the next. The fact that the regression models fit both tests and both years at very similar and substantial levels would indicate that comparison from year to year is legitimate; that is, although classes may differ one from the other in the children tested, the predictors for performance (income and education, specifically) remain fairly constant within a school. With both the value added and the change measures, therefore, it is reasonable to expect that what is being seen in the proposed sample schools are schools that were (1) doing about as predicted in 1998 but (2) improving substantially between 1998 and 1999 and (3) therefore moving into the high "value added" category in the second year of the test. This approach is designed, therefore, to identify those schools that potentially did something different between the years and thus "added" to what could be expected for that group of students.

All sample schools were at or below predicted levels of performance on both tests in 1998, all increased their math and reading scores substantially between 1998 and 1999, and all were performing substantially above predictions in 1999 in both tests. Because larger numbers of students in a school are more likely to be impervious to random fluctuations than small numbers, the average number of students tested in the 7th grade each year is listed, along with the percent free/reduced lunch and the math and reading scores each year.

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